

18 AAC 80 is amended by adding a new section to read:

18 AAC 80.621. Limited alternative to filtration; approval; requirements;

termination by department. (a) The owner of a public water system that uses a surface water or GWUDISW source that operated under the filtration avoidance criteria of 18 AAC 80.620 on October, 1, 1999 may petition the department to avoid filtration through approval of limited alternative to filtration of their source water. Limited alternative to filtration must be approved by the department under 42 U.S.C. § 300g-1(b)(7)(C)(v) and the Administrator of the EPA or the Administrator's authorized delegate must concur with the department's approval. The department will not approve a limited alternative to filtration unless the owner of the public water system demonstrates ability to comply with (b) - (g) of this section. A public water system providing limited alternative to filtration must comply with all requirements for an unfiltered public water system except 40 C.F.R. 141.71; this includes mandatory compliance with 40 C.F.R. 141.72(a)(2) - (a)(4), 40 C.F.R. 141.708 - 141.709, and 40 C.F.R. 141.712(d).

(b) To maintain watershed control, the owner of a public water system authorized by the department to provide limited alternative to filtration shall

(1) demonstrate that the system's watershed is undeveloped, is in consolidated ownership, and is uninhabited except for designated individuals and periods of time each year that are directly associated with protection of the watershed;

(2) demonstrate control over all facilities and human activities in the watershed that may affect source water quality to prevent degradation of the physical, chemical, radiological, and microbiological quality of the source water, including preventing virus, *Giardia* cysts, and *Cryptosporidium* oocysts contamination;

(3) develop and implement a department-approved watershed control program that

(A) characterizes the watershed's hydrology and land ownership;

(B) identifies watershed characteristics and activities that may adversely affect source water quality; and

(C) monitors the occurrence of activities that may adversely affect source water quality;

(4) submit an annual watershed report to the department that

(A) identifies any special concerns about the watershed and explains how the concerns are being handled;

(B) describes activities in the watershed that affect water quality; and

(C) projects what adverse activities are expected to occur in the future and describes how the public water system expects to address them;

(5) if the department determines that significant changes have occurred in the watershed, submit, within 90 days of notification, an updated watershed control program to the department for review and approval; and

(6) conduct additional monitoring, if required by the department, to demonstrate the adequacy of the watershed control program.

(c) To ensure departmental access for compliance assessment purposes, the owner of a public water system authorized by the department to provide limited alternative to filtration shall

(1) permit the department to access the system and the watershed;

(2) on an annual or more frequent basis, as determined necessary by the department to protect the health of consumers served by the system, submit to on-site inspection

conducted by the department; the on-site inspection

(A) must indicate to the department's satisfaction that the watershed control program and disinfection treatment process are adequately designed and maintained; and

(B) will include:

- (i) a review of the effectiveness of the watershed control program;
- (ii) a review of the physical condition of the source intake and how well it is protected;
- (iii) review of the system's equipment maintenance program to ensure there is low probability for failure of the disinfection process;
- (iv) an inspection of the disinfection equipment for physical deterioration;
- (v) a review of operating procedures;
- (vi) a review of data records to ensure that all required tests are being conducted and recorded and disinfection is effectively practiced; and
- (vii) identification of any improvements which are needed in the equipment, system maintenance and operation, or data collection; and

(C) will result in a written report prepared by the department that summarizes the department's findings;

(3) correct any deficiencies after an unsatisfactory inspection under (2) of this subsection, as directed by the department and in accordance with a department-established schedule; and

(4) pay onsite inspection fees required under 18 AAC 80.1910(a)(1).

(d) The owner of a public water system authorized by the department to provide limited alternative to filtration shall ensure that the turbidity level in a representative source water sample taken before primary disinfection does not exceed 5 NTU. If a turbidity event occurs, the owner shall

(1) provide public notice under 18 AAC 80.1000;

(2) if a system has three turbidity events in 12 calendar months or six turbidity events in 120 calendar months, submit a report to the department not more than 30 days after the third or sixth event, as applicable, began; the turbidity event report must include

(A) a detailed description of the turbidity events;

(B) a summary of turbidity events that occurred in the 12 or 120 calendar months prior to the third or sixth event, as applicable;

(C) a proposed corrective action plan; and

(D) a schedule for implementing the proposed corrective action plan;

(3) if water was served to the public and a system records either four or more turbidity events in 12 calendar months or seven or more turbidity events in 120 calendar months, submit an engineering plan to the department to discharge source water with turbidity levels above 5 NTU to waste not more than 90 days after the end of the fourth or seventh turbidity event, as applicable, and implement the discharge plan not more than 18 months after receiving department approval.

(e) To monitor inactivation and removal levels, the owner of a public water system authorized by the department to provide limited alternative to filtration shall

(1) continuously monitor treatment parameters;

(2) ensure that the public water system complies with the maximum contaminant level (MCL) for total coliforms in 40 C.F.R. 141.63(a) and (b) and the MCL for *E. coli* in 40 C.F.R. 141.63(c) in at least 11 of the 12 previous months that the system served water to the public on an ongoing basis, unless the department determines that failure to do so was not caused by a deficiency in treatment of the source water;

(3) ensure that the public water system complies with the requirements for total trihalomethanes, haloacetic acids (five) (HAA5), bromate, chlorite, chlorine, chloramines, and chlorine dioxide in 40 C.F.R. 141.130 through 40 C.F.R. 141.135;

(4) ensure that, in at least 95 percent of treated water by volume on a daily basis, the following microbial inactivation levels are achieved:

(A) 99.9 percent (3-log) of *Cryptosporidium*;

(B) 99.99 percent (4-log) of *Giardia*; and

(C) 99.999 percent (5-log) of viruses;

(5) ensure that, in at least 99 percent of treated water by volume on a daily basis, the following microbial inactivation levels are achieved

(A) 99 percent (2-log) of *Cryptosporidium*;

(B) 99.9 percent (3-log) of *Giardia*; and

(C) 99.99 percent (4-log) of viruses;

(6) submit a monthly operator report on a form provided by the department to document compliance with paragraphs (1) and (2) of this subsection; and

(7) provide public notice for any failure to meet the microbial inactivation requirements of paragraphs (4) or (5) of this subsection.

(f) In the event of failure to meet the microbial inactivation requirements of (e)(4) of this section, the owner of a public water system shall

(1) identify, not more than 10 days after the failure to meet inactivation requirements, the treatment process or component that failed and submit a report to the department detailing the causes of the failure that describes the corrective action taken;

(2) if the failure occurred during two of the preceding 12 calendar months, submit, not more than 30 days after the second failure to meet inactivation requirements, a report to the department that includes

(A) a description of the failure;

(B) a summary of previous inactivation failures;

(C) a proposed corrective action plan; and

(D) a schedule for implementing the action plan; and

(3) if the failure occurred during three of the preceding 12 calendar months

(A) contact the department, not later than 30 days after the last day of month that the system did not meet the inactivation requirements, to coordinate and comply with a department-conducted disinfection performance inspection to determine whether the system is able to reliably meet inactivation requirements;

(B) if the department determines following a disinfection performance inspection that the system is unable to reliably meet inactivation requirements, install filtration under the timeline provided under (h) of this section; and

(C) pay an inspection fee required under 18 AAC 80.1910(a)(1).

(g) The owner of a public water system authorized by the department to provide a limited alternative to filtration shall ensure that the public water system does not cause a waterborne

disease outbreak. If the department identifies a public water system as the cause of a waterborne disease outbreak, the owner shall submit a report to the department not more than 30 days after the system is identified as the cause of a waterborne disease outbreak. The owner's report must include

- (1) a description of the outbreak;
- (2) a summary of previous waterborne disease outbreaks attributed to the system;
- (3) a proposed corrective action plan; and
- (4) a schedule for implementing the action plan.

(h) If the department identifies a public water system as the cause of a waterborne disease two or more times in a 10-year period, the department will disqualify the system from providing limited alternative to filtration and the owner shall install a filtered water treatment system. If a public water system is disqualified from providing limited alternative to filtration, the owner shall

- (1) submit an engineering plan to the department to request approval to construct a filtration plant not more than 180 days after disqualification; and
- (2) complete installation of filtration treatment within 18 months of the department's approval to construct. (Eff. ___/___/_____, Register _____)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.1990(a) is amended by adding new paragraphs to read:

(172) "limited alternative to filtration" means the alternative to 40 C.F.R. 141.71 permitted under 42 U.S.C. 300g-1(b)(7)(C)(v) that ensures greater removal or inactivation

efficiencies of pathogenic organisms than would be achieved by the combination of filtration and chlorine disinfection;

(173) "turbidity event" means a series of consecutive days during which at least one turbidity measurement each day exceeds 5 NTU.

(Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 1/11/2004, Register 169; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 11/20/2009, Register 192; am 7/25/2010, Register 195; am 11/11/2010, Register 196; am 5/20/2011, Register 198; am 8/20/2012, Register 203; am 12/13/2014, Register 212; am 2/11/2017, Register 221; am 5/3/2019, Register 230; am 10/1/2023, Register 247; ____ / ____ / ____, Register ____)

Authority: AS 46.03.010 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710